Fc/m 3160-3 (November 1983) (formerly 9-331C)

# UNITED STATES

SUBMIT IN TRIPLICATE\* (Other instructions on reverse side)

Form approved. Budget Bureau No. 1004-0136 Expires August 31, 1985

5.	LEASE	DESIGN.	ATION	AND	SERIAL	NO.
	1	. 20	7769	1.1	76	

	DEPARTMEN	IT OF THE INTE	RIOR	ſ	5. LEASE DESIGNATION	AND SERIAL NO.
	BUREAU O	F LAND MANAGEME	NT		14-20-н62	
APPLICATION	FOR PERMIT	TO DRILL, DEEP	PEN, OR PLUG B	ACK	6. IF INDIAN, ALLOTTE	
1a. TYPE OF WORK	TOR TERMINA	10 2			Ute India	
DRIL	LX	DEEPEN	PLUG BAC	CK 🗆 🏻	7. UNIT AGREEMENT N	AME
b. TYPE OF WELL		,	NAME OF THE PROPERTY OF THE PR		<del></del>	
MEI'I' X MEI'	L OTHER		SINGLE WULTIP	المنادة	S. FARM OR LEASE NA	
2. NAME OF OPERATOR					Ute Tribal	
Conoco I	nc.	·	THE PARTY OF	K-1	9. WELL NO.	
3. ADDRESS OF OPERATOR			INN 90 10	107	<i>3]</i> 3	
	h Poplar, Ca			10/	10. FIELD AND POOL,	R WILDCAT
4. LOCATION OF WELL (Repo	ort location clearly an	nd in accordance with any	State requirements.*)		Green Rive	I WILDEAT
At surface 1,937 F	SL, 2,033' H	FWL (NE/SW)	DIVISION		11. SEC., T., B., M., OR AND SURVEY OR AL	BLK.
At proposed prod. zone	, ,		OIL, GAS & M	INING	AND BORVET OR A	
At proposed prod. zone					Section 24, 1	74S, R1E
14. DISTANCE IN MILES AND	D DIRECTION FROM NE	AREST TOWN OR POST OFFIC	CE*		12. COUNTY OR PARISH	13. STATE
Approximately	14.5 miles so	outheast of Fort	Duchesne, UT		Uintah	Utah
15. DISTANCE FROM PROPOSE			O. OF ACRES IN LEASE		F ACRES ASSIGNED	<del>'</del>
LOCATION TO NEAREST PROPERTY OR LEASE LIN (Also to nearest drig. 1	E, FT.		638	TOTH	638	
18. DISTANCE FROM PROPOS	ED LOCATION*	19. P	ROPOSED DEPTH	20. ROTAR	Y OR CABLE TOOLS	
TO NEAREST WELL, DRII OR APPLIED FOR, ON THIS	LEASE, FT.	-	6,810'		Rotary	
21. ELEVATIONS (Show wheth 5,034 *					April 1,	
23.		PROPOSED CASING AN	D CEMENTING PROGRA	M	<u></u>	
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	<u> </u>	QUANTITY OF CEME	NT
12½"	9-5/8"	36#/ft.	300'	1	65 sacks Class	s "H"
8-3/4"	7"	23 & 26#/ft.	6,810'		00 sacks Class	
		23 & 2011 / 201	3,020	20	00 sacks 65/35	5 Poz + 6% G
		) , , , , , , , , , , , , , , , , , , ,	1 2 O I	) )	il producer	Tho
is proposed to d	rill conoco (	Jte Iribai 24 No	o, jas a Green i	TAGE O	et seme point	in
llbore might be u ne.	ised for injec	ction purposes I	or secondary rec	covery	at some point	TII
l appropriate log	s will be ru	a. A BOP will b	e installed and	functi	on tested dail	Ly.
subsequent report			3 4			
used for complet	ion operation	ns, and all cond	litions of this a	applica	tion will appl	ly during
ch operations.	,	,				_

As bе suc

Attachments:

- 1.) Survey Plat
- 2.) 10-Point Plan
- 13-Point Plan
- 4.) BOP Diagram
- 5.) Archaeological Survey
- \*Threatened & Endangered Species Survey

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout

preventer program, if any.					
SIGNED Che	myson TI	TLE Admin.	Supervisor	DATE1-13-87	
(This space for Federal or State office us	e)			The second secon	
PERMIT NO. 43-047-	31785		APPROVE	D BY THE STATE	
PERMIT NO.	37,00	APPROVAL	OF UTA	H DIVISION OF	
APPROVED BY	т	TLE	OIL, GA	S, AND MINING	
CONDITIONS OF APPROVAL, IF ANY:			DATE: 2.2		
BLM - Vernal (4) <u>UOGC (2)</u>	AFE File 418	5 (SJM)	BY: John X	. Bux	
	*See Instr	uctions On Reve	SINE SPACE	ING: 302	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Lease No. 14-20-H62-4376 Ute Tribal 24 No. 3 Page 2

Please disregard the narrative in the Archaeological Survey concerning Ute Tribal 21 No. 4. The location of Ute Tribal 21 No. 4 has been changed since this survey was prepared. A revised survey will be submitted with the Application for Permit to Drill Well 21 No. 4.

Conoco Inc. has current and correct Corporate Qualifications on file in the Cheyenne, Wyoming office of the Bureau of Land Management as required by WY-2800-39 (April 1981) covering Right of Way requirements. Reference No. W-56943 dated May 14, 1981.

\*The Threatened & Endangered Species Survey will be submitted upon completion.

## 10 Point Drilling Program Attachment to Form 9-331C

- 1. Geological Surface Formation: Uinta
- 2. Geological Marker Tops:

Formation	Drilled Depth
Green River	2,234'
Wasatch	6,710'

3. Depths at which water, oil, gas or other mineral bearing formations are expected to be encountered.

Formation	Es	timat	ed Top
Green River	2,234'	oil,	water
Wasatch	6,710'	oil,	gas, water

4. Proposed Casing Program: All New Casing

	Cement
300' - 8 5/8", 24#/ft., K-55, ST&C	165 sacks Class "H"
6,000' - 7", 23#/ft., K-55, LTC	500 sacks Class "H"
810' - 7", 26#/ft., K-55, LTC	200 sacks 65/35 Poz + 6% Gel

- 5. Operator's Specifications for Pressure Control Equipment:
  - a. Minimum working pressure on rams and BOP equipment will be 3,000 psi.
  - b. Function test and visual inspection of the BOP will be conducted daily and noted in the Daily Drilling Report.
  - c. Both high and low pressure tests of the BOP will be conducted weekly.
- 6. Proposed Circulating Medium:

			Viscosity	
Depth	Mud Type	Density (1b./gals.)	(Sec./Qt.)	Water Loss
0'- 300'	Native	8.5 - 9.0	30-45	NC
300'-5,000'	2% KC1	8.7 - 9.0	26-30	10-20 cc
5,000'-6,810'	2% KC1	9.0 - 10.0	30-40	Less than 10cc

The reserve pit will be lined.

- 7. Auxiliary Equipment:
  - a. Kelly cock.
  - b. Monitoring of the mud system will be done visually. A full opening drill pipe stabbing valve will be kept on the floor at all times.

10 Point Drilling Program Attachment to Form 9-331C Ute Tribal 24 #3 Page 2

8. Testing, Logging and Coring:

Cores: None
DST: 1 - Green River 5,300'-6,600'
Logging: DLL-MSFL; FDC-CNL-GR, T.D. to 300'
Formation and Completion Interval: Green River 5,300'-6,600'

9. Abnormal Pressures or Temperatures; Potential Hazards No abnormal pressures or temperatures are anticipated. Anticipated bottom hole pressure is 2,450 psi.

10. Anticipated Starting Date and Duration:

April 1, 1987 15 days

Revised July 1, 1986

Date NOS Received 11-28-86

# CONDITIONS OF APPROVAL FOR THE SURFACE USE PROGRAM OF THE APPLICATION FOR PERMIT TO DRILL

Company/Operator	Conoco Inc.
Well Name & Number	Ute Tribal 24 #3
Lease Number	14-20-Н62-4376
Location NE 1 SW 1	Section 24 Township 4S Range 1E
Surface Ownership	Coleman Brothers/Ute Tribe

THIRTEEN POINT SURFACE USE PROGRAM: Multipoint Requirements to Accompany APD 1.

#### Existing Roads

- See attached Topographic Map for approximate wellsite location and lengths of road to be reconstructed and new-built. Exhibit 1.
- Ute Tribal 24 #3, proposed to be drilled to a TD of 6,810't in the В. Green River formation is located approximately 11.9 miles south of the Fort Duchesne Agency in the NE/4 SW/4 Section 24, T4S, R1E, Uintah County, Utah. From the Fort Duchesne Agency proceed south on the bituminous surface road to its intersection with the Duchesne River thence left onto the Uintah County gravel surface road (Loop #16) approximately 1/4 mile south of the river crossing. Proceed on the Uintah County road for 6 miles then turn due east onto an improved jeep trail for 0.9 miles and turn southeast following the improved jeep trail for 1.3 miles to the wellsite location.
- C ... The access road is shown in Red and labeled on Exhibit 1 and la.
- 0.3 miles of access road will be improved to allow temporary usage during drilling operations with an additional 0.4 miles of new road built from the improved road to the wellsite. The access road will be maintained to the standards required by the BLM and BIA during drilling operations. However, if the well proves to be commercial it will be upgraded to an all-season road and maintained to the existing BLM and BIA standards.

#### Surface Ownership

98% of the surface land involved in the construction of the access road and location site are owned by the Coleman Brothers, RFD, Bridgeland, UT 84012. A 200' section of access road in Section 23, T4S, R1E is owned by the Ute Indian Tribe under the jurisdiction of the BIA.

#### The Topography of the General Area

The project area is on rangeland that comprises the top of Leland Bench. The Duchesne River is located approximately 9 miles to the north of the location site.

The access route extends southward from the county road along the bench gradually descending over a series of low rocky outcrops.

The topsoil in the area are clay containing desert varnished cobbles and stone fragments.

The majority of the numerous washes and draws in the area are of a non-perennial nature flowing during the early Spring run-off and extremely heavy rain thunderstorms of long duration, which are extremely rare as the normal annual rainfall in the area is only 8".

The Duchesne River to the north of this location is the only perennial water that is affected by this location site.

The vegetation that is found in the area is common of the semi-arid region we are located in; it consists of primary flow areas of saltbrush, rabbit brush, some grasses and cacti as the primary flora.

The fauna of the area consists predominently of prairie dogs. A small number of burrows of prairie dogs were observed in the area of the drill site. The area is used by man for the primary purpose of grazing lands for domestic sheep and cattle.

The area is undoubtedly visited by raptors in search of prey and is likely overflown by itinerant eagles, hawks and falcons. No nesting sites were seen in the immediate area of the drill site.

#### The Topography of the Immediate Area

Ute Tribal 24 #3 is situated near the head of a shallow drainage carved into the Duchesne River formation.

The vegetation in the immediate area surrounding the location site consists of saltbrush and some grasses.

There are no occupied dwellings or other facilities of this nature in the general area.

There are no visible archaeological, historical, or cultural sites within any reasonable proximity of the proposed location site.

- 2. Planned Access Roads—describe the following and provide a map of suitable scale indicating all necessary access roads (permanent and temporary) to be constructed or reconstructed, showing: (see below and Exhibit 1)
  - A. Length 0.3 miles reconstructed road and 0.4 miles new road
  - B. Width 30 foot right-of-way with 18 foot running surface maximum, if a producer.
  - C. Maximum grades 10%
  - D. Turnouts None needed
  - E. Drainage design Borrow Ditches
  - F. Location and size of culverts and/or bridges, and brief description of any major cuts and fills Low water crossings
  - G. Surfacing material (source) None needed

13 Point Surface Use Program Ute Tribal 24 #3

- H. Necessary gates, cattleguards, or fence cuts and/or modification to existing facilities None
- I. Access road surface ownership Ute Tribe & Private (Coleman Brothers, RFD, Bridgeland, UT 84012)

(New or reconstructed roads are to be centerline-flagged at time of location staking).

All travel will be confined to existing access road rights-of-way.

Access roads and surface disturbing activities will conform to standards outlined in the  $\underline{\text{USGS Publication (1978)}}$  Surface Operating Standards for Oil & Gas Development.

The road shall be upgraded to meet the standards of the anticipated traffic flow and all-weather road requirements. Upgrading shall include ditching, draining, graveling, crowning, and capping the roadbed as necessary to provide a well constructed safe road. Prior to upgrading, the road shall be cleared of any snow cover and allowed to dry completely. Traveling off the 30 foot right-of-way will not be allowed. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the roadbed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.

- 3. Location of Existing Wells--describe the following and provide a map or plat of all wells within a 1 mile radius of the proposed well location showing and identifying existing: (see Exhibit 2)
  - A. Water wells None
  - B. Abandoned wells None
  - C. Temporarily abandoned wells None
  - D. Disposal wells None
  - E. Drilling wells None
  - F. Producing wells Conoco's Ute Tribal 26 No. 1 well is located in NE/4, Section 26, T4S, RIE, Uintah County, Utah.
  - G. Shut-in wells None
  - H. Injection wells None
- 4. Location of Existing and/or Proposed Facilities
  - A. On well pad, if well is successfully completed for production, see Exhibit 4. All lines will be installed above ground and insulated.

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B. Off well pad facilities are not anticipated at this time, since the battery will be self-sustaining. If further facilities are required, Conoco Inc. will apply for approval of subsequent off well pad operations.

If a tank battery is constructed on this lease, the battery or the well pad will be surrounded by a dike of sufficient capacity to contain  $1\frac{1}{2}$  times the storage capacity of the battery. The integrity of the dike must be maintained.

The tank battery will be placed on the  $\underline{\text{NW}}$  side of location by point 8 (see Exhibit 4).

All permanent (on site for six months or longer) structures constructed or installed (including pumping units) will be painted a <u>flat</u>, non-reflective, <u>earthtone color</u> to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

The required paint color is Desert Brown (10 YR 6/3)

#### 5. Location and Type of Water Supply

- A. Show location and type of water supply, either by  $\frac{1}{4}$ ,  $\frac{1}{4}$  section on a map or by written description. Duchesne River see Exhibit 1.
- B. State method of transporting water, and show any roads or pipelines needed. The water will be transported by Tank Truck using road as shown on Exhibit 1.
- C. If water well is drilled on lease, so state no

#### 6. Source of Construction Materials

Construction materials will be native soil and gravel deposits during the drilling phase, however if the well is a commercial producer gravel will be procured from the Ute Indian Tribe to upgrade the access road.

#### 7. Method for Handling Waste Disposal

A. Describe methods and location of proposed safe containment and disposal of each type of waste material, including:

<sup>\*</sup> The operator will be responsible for acquiring the necessary permit to obtain water to be used for drilling activities. The Permit for Use of Water application has been tendered to the Ute Tribe.

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(1) Cuttings - will be left in reserve pit.

(2) Sewage - will be contained in Porta Potty.

- (3) Garbage (trash) and other waste material will be collected in covered wire cages and hauled to sanitary landfill.
- (4) Salt will be contained in lined pit.
- (5) Chemicals will be contained in lined pit.
- B. Provide a plan for eventual disposal of drilling fluids and any produced oil or water recovered during testing operations. Will be hauled by truck from the location to one of the following disposal facilities:

LaPoint Recycle & Storage Section 12, T5S, R19E Uintah County, Utah MC & MC Pits Section 27, T1N, R2W Duchesne County, Utah Hanson Disposal Section 7, T3S, R3W Duchesne County, Utah

- \* Burning will not be allowed. All trash must be contained in a trash cage and hauled away to an approved disposal site at the completion of the drilling activities.
- \* Pits are not to be located in natural drainages where a flood hazard exists or surface runoff will destroy or damage the pit walls, unless otherwise herein provided.

#### On BIA administered lands:

To protect the environment:

The reserve pit will be lined with plastic sufficient to prevent seepage. (If a plastic nylon reinforced liner is used, it shall be torn and perforated after the pit drys and before backfilling of the reserve pit).

Plastic liner will be 10 mil thickness with sufficient bedding to cover any rocks in the pit and liner will overlap pit walls and be covered with dirt and/or rocks to hold it in place.

Pits will be constructed so as not to leak, break or allow discharge of liquids.

Produced waste water will be confined to a lined pit or storage tank for a period not to exceed 90 days after initial production. During the 90 day period an application for approval of a permanent disposal method and location, along with required water analysis, will be submitted for the AO's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance.

#### 8. Ancillary Facilities

- A. Identify all proposed camps and airstrips on a map as to their location, and area required, and construction methods. (Camp center and airstrip centerlines to be staked on the ground).
- X Camp facilities or airstrips will not be required.

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- 9. Well Site Layout--provide a plat (not less than l'' = 50') showing: (see Exhibit 3).
  - A. Cross-sections of proposed drill pad with approximate cuts and fills and the relation to topography.
  - B. Location of mud tanks, reserve, blooie, and emergency pits, pipe racks, living facilities, and soil material stockpiles, etc. (Approval as used in this section means field approval of location).
  - C. Rig orientation, parking areas, and access roads, etc.

All pits will be fenced with a wire mesh fence and topped with at least one strand of barbed wire. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off the location. Any hydrocarbons in the pit will be removed from the pit as soon as possible after drilling operations are completed. Pits will be fenced and maintained until clean-up.

The fence will be constructed as prescribed in the <u>USGS Publication (1978)</u> Surface Operating Standards for Oil & Gas <u>Development</u>. Alternatives to the prescribed standards shall be submitted to the Authorized Officer for Approval.

Well Site Layout: The reserve pit will be located on the: Southeast side of location

The stockpiled topsoil will be stored on the: West end of location

Access to the well pad will be from the: West end of the location by point 7.

The #8 corner of the well pad will be rounded off to avoid drainage.

#### 10. Plans for Restoration of Surface

- A. Provide a restoration program upon completion of operations, including:
  - (1) Backfilling, leveling, recontouring, and waste disposal; segregation of topsoil from cut materials as needed.
  - (2) Revegetation and rehabilitation--including abandoned access roads or portions of well pads no longer needed (normally per BLM recommendations).
  - (3) Proposed timetable for commencement and completion of rehabilitation operations.
- B. The following are provisions to be addressed in the restoration plan:

Immediately upon well completion, the location and surrounding area will be cleared of all debris, materials, trash and junk not required for production.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry and all cans, barrels, pipe, etc. will be removed. The reserve pit and that portion of the location and access road not needed for production facilities/operations will be reclaimed. The reserve pit will be reclaimed within 90 days from the date of well completion.

All disturbed areas will be recontoured to the approximate natural contours.

The stockpiled topsoil will be evenly distributed over the disturbed areas.

Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface.

Seed will be broadcast or drilled at a time specified by the BIA/Private Surface Owner. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage and the seed mixture will be proportionately larger (double the lbs. per acre).

An appropriate seed mixture will be determined by the BIA/Private Surface Owner, either as part of the Conditions of Approval of the APD or at the time restoration activities are scheduled to begin.

All seeding will be done from September 15th until the ground freezes.

At such time as the well is plugged and abandoned the operator will submit a surface reclamation plan to the BIA for prescribed seed mixtures and reseeding requirements.

If the seeding is unsuccessful, the lessee/operator may be required to make subsequent seedings.

#### On BIA administered lands:

Abandoned well sites, roads, or other disturbed areas will be restored to near their original condition. This procedure will include: (a) reestablishing irrigation systems where applicable, (b) reestablishing soil conditions in irrigated fields in such a way as to insure cultivation and harvesting of crops and, (c) insuring revegetation of the disturbed areas to the specifications of the Ute Indian Tribe or the BIA at the time of abandonment.

The operator will submit a plan of controlling noxious weeds along rights-of-way for roads, pipelines, well sites or other applicable facilities. A list of noxious weeds can be obtained from the appropriate county extension office.

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#### The BLM recommends the following procedure for reclamation:

Compacted areas of the well pad should be plowed or ripped to a depth of 12" before reseeding. Seeding should be done with a disc-type drill to 10" apart. The seed should be planted between ½" deep the 3/4" deep. A drag, packer or roller may be used to insure uniform coverage of the seed, and adequate compaction. Drilling of the seed should be done on the contour where possible. Where slopes are too steep for contour drilling a "cyclone" hand-seeder or similar broadcast seeder should be used, using twice the recommended seed per acre. Seed should then be covered to a depth described above by what-ever means is practical.

## 11. Surface Ownership: Location - Coleman Brothers, RFD, Bridgeland, UT 84012 Road - 200' Ute Indian Tribe; 3,276' Coleman Brothers

Provide the surface ownership (Federal, Indian, State or private) at the well location, and for all lands crossed by roads which are to be constructed or upgraded.

Where the surface of the well site is privately owned, the operator shall provide the name, address, and, if known, telephone number of the surface owner.

#### 12. Other Additional Information

The BLM recommends a general description of:

- A. Topography, soil characteristics, geologic features, flora and fauna.
- B. Other surface-use activities and surface ownership of all involved lands.
- C. Proximity of water, occupied dwellings, archaeological, historical or cultural sites.

Items A, B and C were discussed in Article I.

A cultural resource clearance will be required before any construction begins on Federal and Indian lands. However, historic and cultural resource work shall be undertaken only with the written consent of a private surface owner. If the private surface owner refuses entry for that purpose, the lessee or operator shall use its best efforts to conduct its approved operations in a manner that avoids adverse effects on any properties which are listed, or may be eligible for listing, in the NRHP.

If, during operations, any archaeological or historical sites, or any object of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites are to be suspended and the discovery reported promptly to the Surface Management Agency.

On BLM administered land, it is required that a proposed use of pesticide, herbicide or other possible hazardous chemicals shall be cleared for use prior to application.

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#### On BIA administered land:

Operator's employees, including subcontractors, will not gather firewood along roads constructed by operators. If wood cutting is required, a permit will be obtained from the Forestry Department of the BIA pursuant to 25 CFR 169.13 "Assessed Damages Incident to Right-of-Way Authorization". All operators, sub-contractors, vendors and their employees or agents may not disturb saleable timber (including firewood) without a duly granted wood permit from the BIA Forester.

If the surface rights are owned by the Ute Indian Tribe and mineral rights are owned by another entity, an approved rights-of-way will be obtained from the BIA before the operator begins any construction activities. If the surface is owned by another entity and the mineral rights are owned by the Ute Indian Tribe, rights-of-way will be obtained from the other entity.

All roads constructed by operators on the Uintah and Ouray Indian Reservation will have appropriate signs. Signs will be neat and of sound construction. They will state: (a) that the land is owned by the Ute Indian Tribe, (b) the name of the operator, (c) that firearms are prohibited to all non-Ute Tribal members, (d) that permits must be obtained from the BIA before cutting firewood or other timber products and (e) only authorized personnel permitted.

All well site locations on the Uintah and Ouray Indian Reservation will have an appropriate sign indicating the name of the operator, the lease serial number, the well name and number, the survey description of the well (either footages or the quarter-quarter section, the section, township, and range).

Additional Surface Stipulations for BLM, BIA, FS, DWR, or Private Surface Lands:

The operator or his contractor shall contact the BLM and BIA Offices at (801) 789-1362 (BLM) and (801) 722-2406 (BIA) between 24 and 48 hours prior to construction activities. Contact: Timothy P. O'Brien - BLM.

The BLM and BIA Offices shall be notified upon site completion prior to moving on the drilling rig.

Blooie pit will be located west of and separate from the reserve pit, toward point #6.

Note: If the land is privately owned, these surface stipulations may be varied to comply with the operator - land owner agreement.

#### 13. Lessee's or Operators Representative and Certification

	<del></del>						
Name:	Michael S. Rooney						
Address:	c/o Conoco Inc 907 North Poplar - Casper, Wyom	ing 82601					
Phone Num	mber: (307) 234-7311						

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his sub-contractors. A copy of these conditions will be furnished the field representative to insure compliance.

The dirt contractor will be provided with an approved copy of the Surface Use Plan from the APD.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

#### Certification:

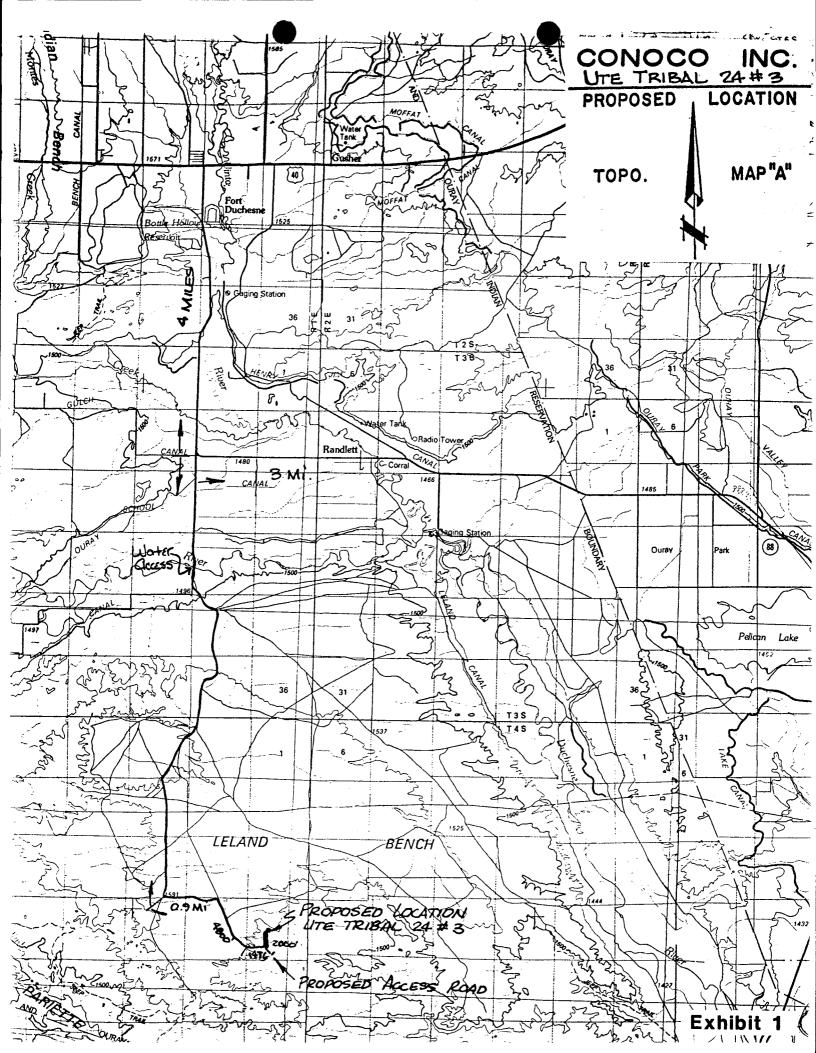
Representative

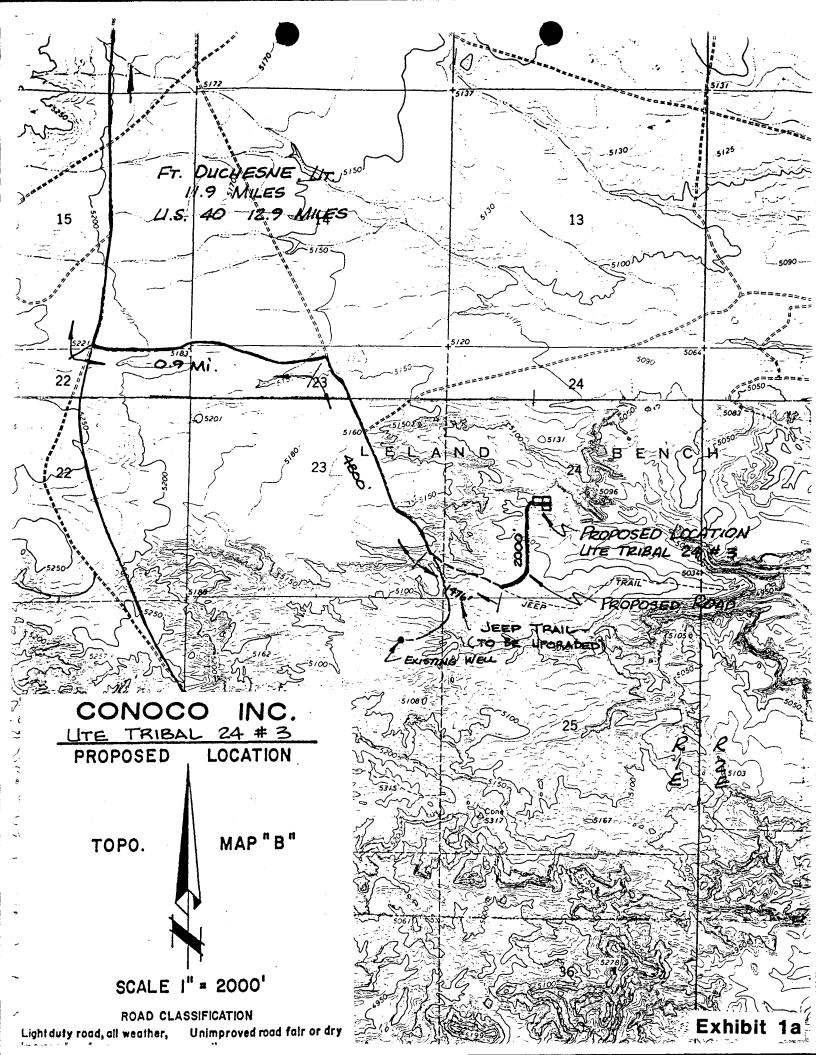
I certify that Conoco Inc. has reached an agreement with Coleman Brothers as to the requirements for the protection of surface resources and reclamation of disturbed areas and/or damages in lieu thereof. If an agreement has not been reached, Conoco Inc. will comply with the provisions of the law or regulations governing the Federal or Indian rights of reentry to the surface (43 CFR 3814).

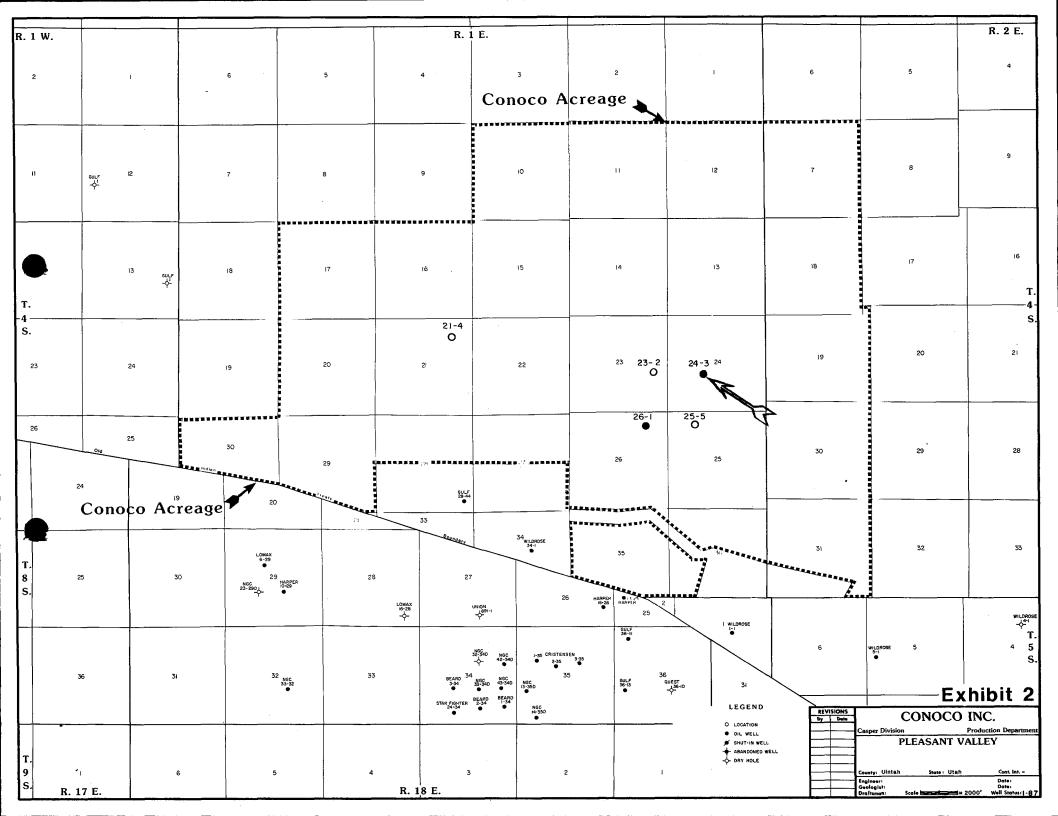
and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Muary 1, 1987 A Rooney Prod. Superintendent Name and Title 13 Point Surface Use Program Ute Tribal 24 #3

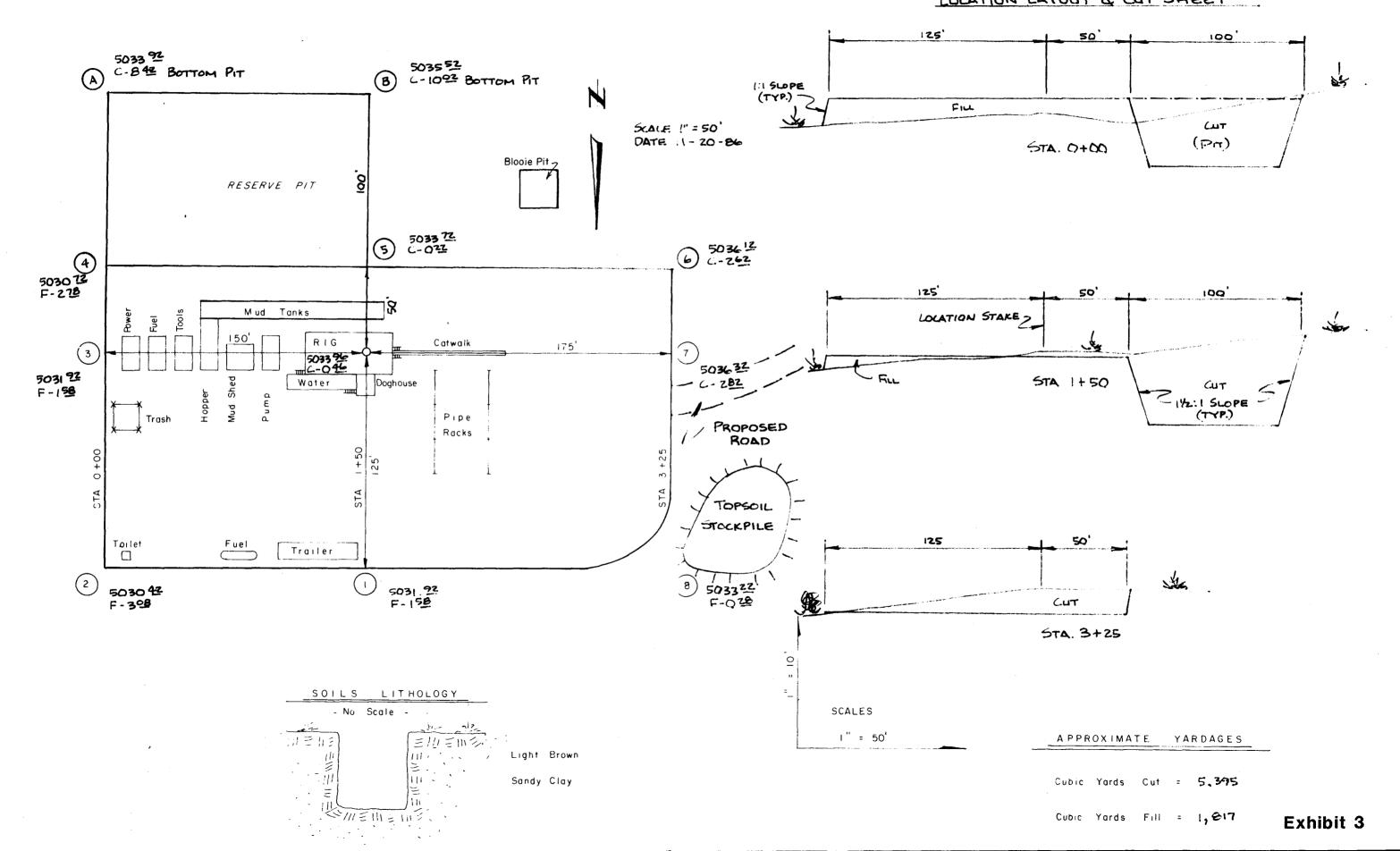
Onsite Date:	12-11-86		
Participants or	n Joint Inspection		
Michael S. Roor	ney - Conoco Inc.		
Timothy P. O'B	cien - BLM		
		-	

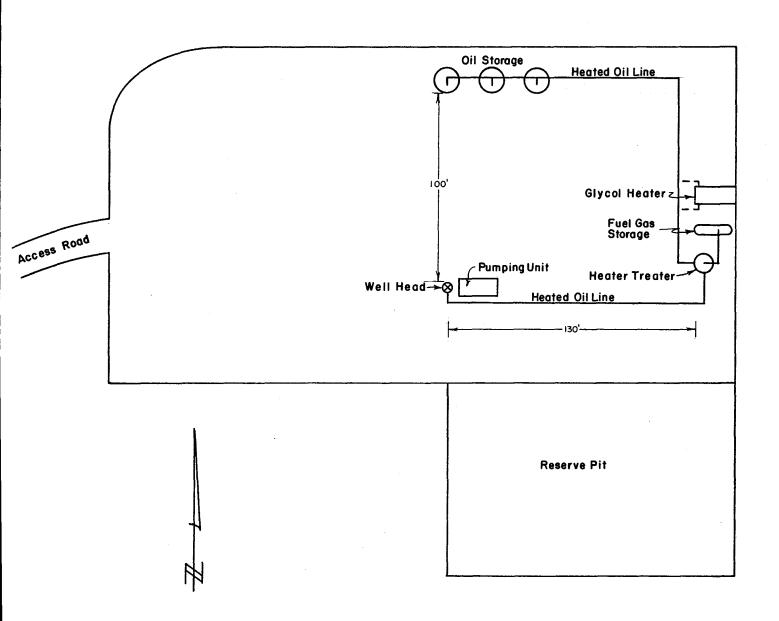






# CONOCO, INC. UTE TRIBAL 24 # 3 LOCATION LAYOUT & CUT SHEET

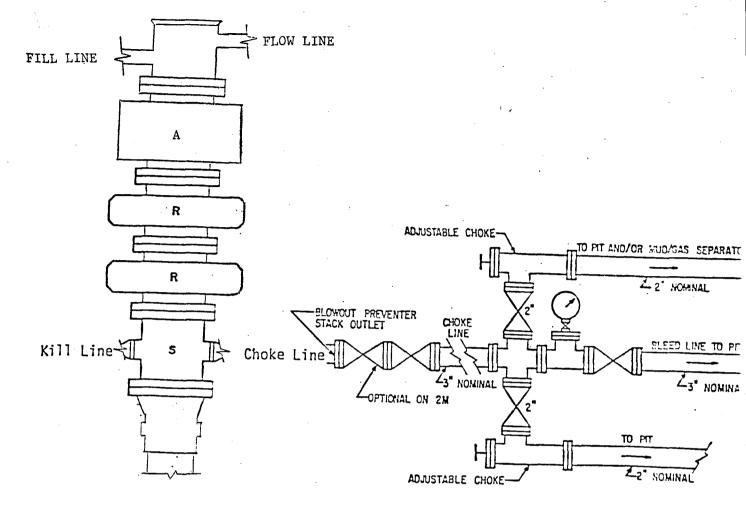




# Proposed Production Facilities Conoco Ute Tribal 24-3

Scale: 1"-50'

Date: 1-13-87



#### DOUBLE RAM TYPE PREVENTERS

Minimum BOP Stack	psi Working Pressure
One Pipe Ram	3,000 psi Working Pressure
One Blind Ram	3,000 psi Working Pressure
One Annular	1.500 psi Working Pressure
Well Head	3,000 psi Working Pressure
Manifold	3.000 psi Working Pressure



# ARCHEOLOGICAL - ENVIRONMENTAL RESEARCH CORPORATION

B

P.O. Box 853 Bountiful, Utah 84010 Tel: (801) 292-7061, 292-9668 December 8, 1986

Subject:

CULTURAL RESOURCE EXAMINATION OF THREE PROPOSED WELL LOCATIONS IN THE PARIETTE DRAW AND LELAND BENCH LOCALITIES OF UINTAH COUNTY,

UTAH

Project:

Conoco Oil Company - Ute Tribal Units 21-4,

23-2 and 24-3

Project No.:

COC-86-2

Permit No.:

Utah State Number U-86-AF-787i Dept. of Interior Ut-86-54937

To: Mr. Michael Rooney, Conoco Oil Company, 907 North
Poplar, Casper, Wyoming 82601

Mr. Roland McCook, Bureau of Indian Affairs, P.O. Box 190, Fort Duchesne, Utah 84026

Mr. Pat Padia, Ute Indian Tribe, Energy & Minerals Dept., P.O. Box 190, Fort Duchesne, Utah 84026

Info: Mr. James Dykman, Preservation Section, Division of State History, 300 Rio Grande, Salt Lake City, Utah 84101

District Manager, Bureau of Land Management, 170 South 500 East, Vernal, Utah 84078

#### GENERAL INFORMATION:

Cultural resource evaluations were made by F. R. Hauck of AERC on December 3 and 4, 1986, of the Conoco Oil Company's three proposed well locations Ute Tribal No. 21-4, No. 23-2 and No. 24-3. These locations have been staked in the Pariette Draw-Leland Bench locality of Uintah County, Utah, and are situated on Ute Tribal land. Mr. Pat Padia and an assistant, both of the Energy and Minerals Department of the Ute Tribe, accompanied the evaluations.

Ute Tribal Unit No. 21-4 is situated in the SW 1/4 of Section 21, Township 4 South, Range 1 East, Uinta Special Base and Meridian as shown on attached Map 1. Units 23-2 and 24-3 are also located in the same township and range, the former in the St 1/4 of Section 23 and the latter in the SW 1/4 of Section 24. Access into Unit 21-4 has been flagged from both the east and from the south as shown on Maps 1 and 2. Unit 23-2 (see Map 3) is situated adjacent to an existing road and requires only a short access development. The access into Unit 24-3 is from the south and southwest of the location as shown on Map 3.

The project area for Unit 21-4 is on the east wall of Pariette Draw Canyon with the eastern access into the location beginning on the top of Leland Bench. The other two locations are on Leland Bench. Leland Bench consists of rolling rangeland and contrasts markedly with the canyon and rimrock environment of the east wall of Pariette Wash. Vegetation found in the vicinity of all three locations include Chrysothamnus nauseosus, Atriplex canescens. Opuntia polyacantha and Bromus tectorum. The project areas are situated from the 5000 to the 5250 foot elevation zones above sea level.

#### FILE SEARCH:

Records checks were conducted on 11-20-86 at the Utah State Antiquities Section in Salt Lake City and at the Vernal Office of the Bureau of Land Management. No known sites were found to be situated in the project areas. The National Register of Historic Places has been consulted and no registered historic or prehistoric properties will be affected by the proposed developments.

#### FIELD METHODOLOGY:

To accomplish an intensive evaluation of the proposed well locations, the archaeologist walked a series of 10 to 15 meter wide transects within the flagged locations, and extended the evaluation a minimum of 30 meters beyond the periphery

stakes. The access routes into all three locations were examined by walking a 15 meter wide transect along the staked center lines.

#### RESULTS:

No cultural material or activity loci of any historic or prehistoric period were observed during the evaluations. Isolated prehistoric artifacts were occasionally observed during the evaluations. These artifacts were of two types. Isolated primary flakes were found in the cobble fields. These flakes are the result of random lithic sampling activities conducted by individuals seeking core materials for reduction into lithic tools. The date of activity is unknown, however, the prevalence of flakes and their varying stages of weathering suggests these activities occurred over a protracted period of time.

The second type of artifact which was commonly observed in the project localities consisted of biface butchering tools. These tools were always found alone suggesting the huntingbutchering activities were accomplished by single individuals and not by hunting groups. These tools are similar to those observed in the general area that were found by this archaeologist in association with Middle Archaic projectile points. The artifacts were constructed from cobbles, mudstone and siltstone materials by striking opposing flakes along the long edge of the tool. jagged, sawtooth blade resulted from this selective flaking technique. One long quartzite blade exhibited flaking modification along the back edge in order to facilitate handling the large tool. Such a tool would be highly effective in dismembering the joints on large game such as antelope, deer or bison. After the butchering process had been completed, the tools were abandoned at the location. One blade contained some evidence of developing desert varnish since its manufacture and discarding. No artifacts were collected during the evaluations.

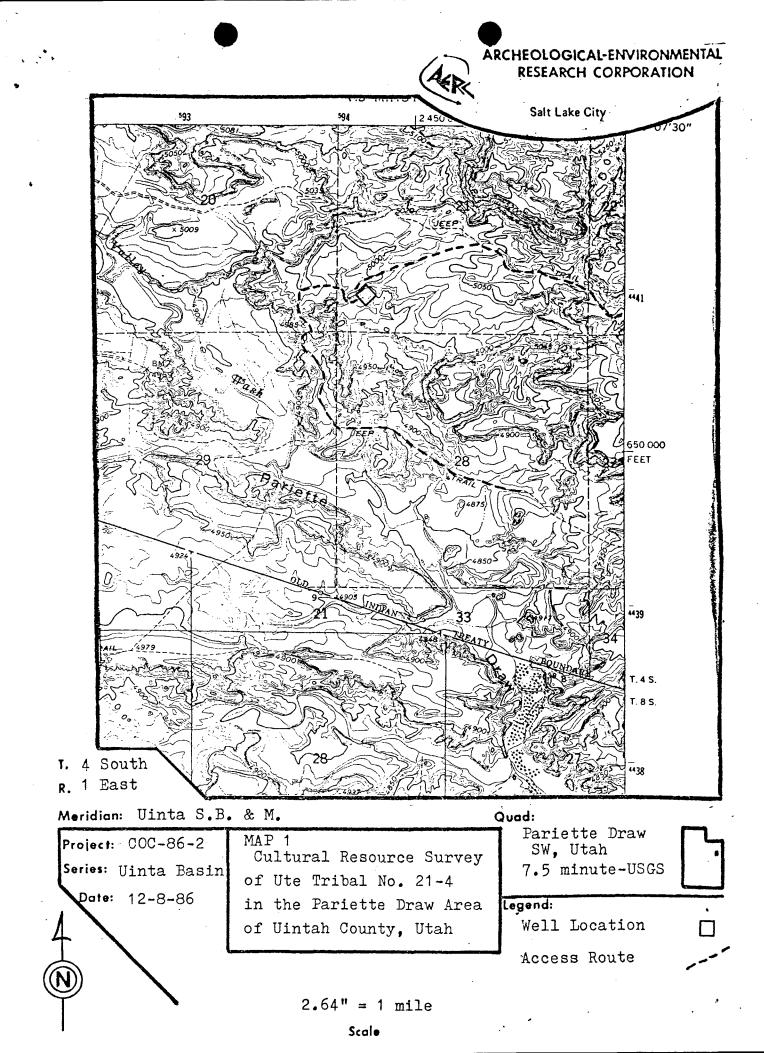
#### CONCLUSION AND RECOMMENDATIONS:

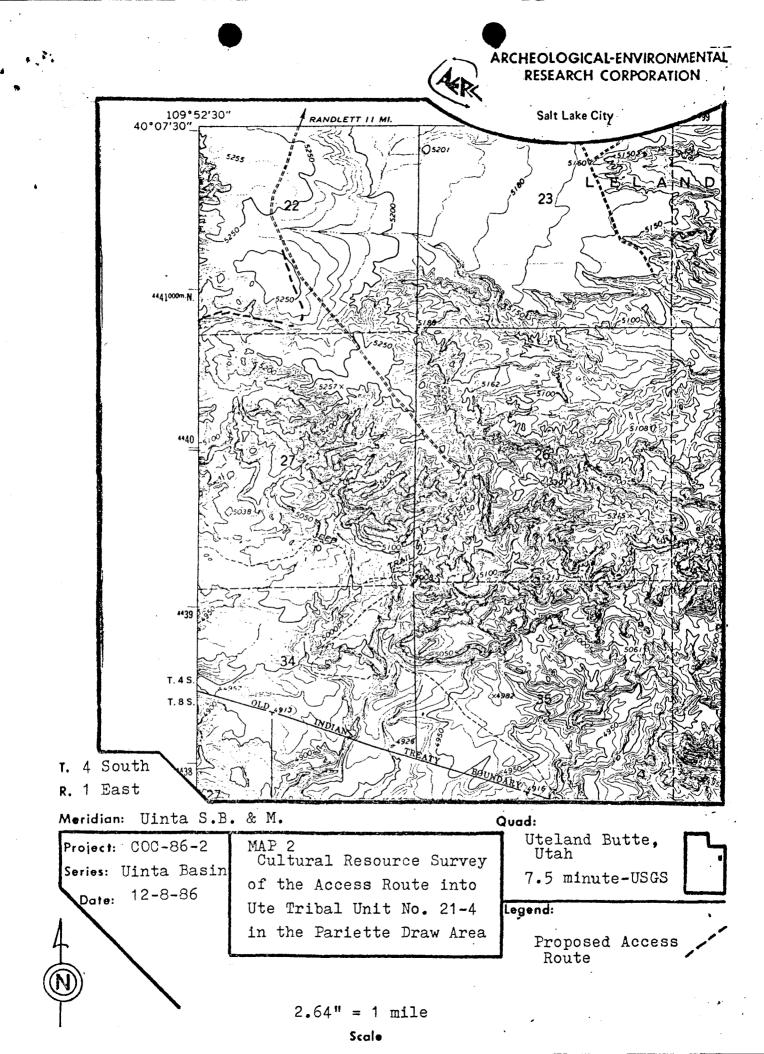
AERC recommends that a cultural resource clearance be granted to Conoco Oil Company relative to these well developments based upon adherence to the following stipulations:

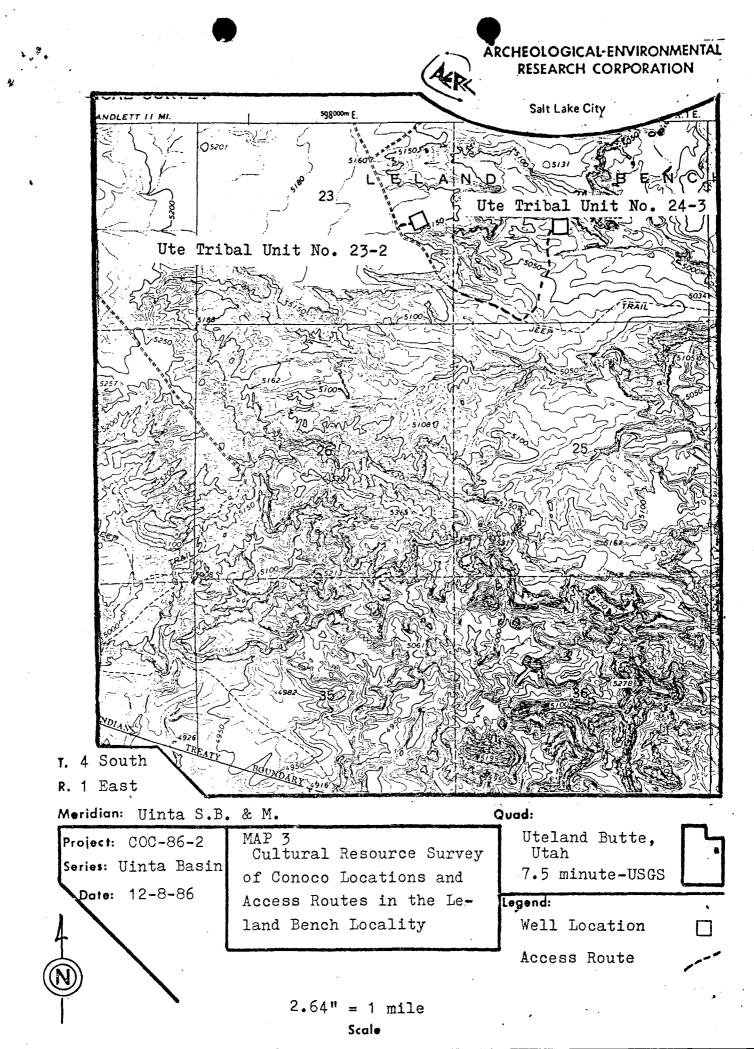
- 1. All vehicle traffic, personnel movement, and construction should be confined to the locations examined;
- 2. all personnel should refrain from collecting artifacts or from disturbing any cultural resources in the area; and

3. the principal authority should be consulted should cultural remains from subsurface deposits be exposed during exploratory and developmental work or if the need arises to relocate or otherwise alter the development area.

F. R. Hauck, Ph.D.
President & Principal
Investigator







OPERATOR Conoco Inc.	DATE 1-29-87
WELL NAME The Tribal 24 #3	
SEC NESW 24 T 45 R 1E	COUNTY Wintel
43-047-31785 API NUMBER	Judian TYPE OF LEASE
CHECK OFF:	
PLAT	NEAREST WELL
LEASE	D POTASH OF OIL SHALE
PROCESSING COMMENTS: No other will within 920'	
ned water permit	
APPROVAL LETTER:	
SPACING: 203 UNIT	302
CAUSE NO. & DATE	302.1
STIPULATIONS: 1- Water	
www.	



355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

February 2, 1987

Conoco Incorporated 907 North Poplar Casper, Wyoming 82601

#### Gentlemen:

Re: Ute Tribal 24 #3 - NE SW Sec. 24, T. 4S, R. 1E 1937' FSL, 2033' FWL - Uintah County, Utah

Approval to drill the referenced well is hereby granted in accordance with Rule 302, Oil and Gas Conservation General Rules, subject to the following stipulations:

 Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

- Spudding notification to the Division within 24 hours after drilling operations commence.
- 2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
- Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
- Compliance with the requirements and regulations of Rule 311.3, Associated Gas Flaring, Oil and Gas Conservation General Rules.

Page 2 Conoco Incorporated Ute Tribal 24 #3 February 2, 1987

- 5. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable State and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 533-6163.
- 6. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-047-31785.

Sincerely,

Associate Director, Oil & Gas

as Enclosures

cc: Bureau of Indian Affairs Branch Fluid Minerals

D. R. Nielson

8159T

Form 3160-3 (November 1983) (formerly 9-331C)

1a. TYPE OF WORK

b. TYPE OF WELL

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

DEEPEN [

APPLICATION FOR PERMIT TO DRILL, DEEPEN,

DRILL X

SUBMIT IN TRIPLICATE. (Other instructions on reverse side)

OR PLUG BACK

PLUG BACK

Form approved. Budget Bureau No. 1004-0136 Expires August 31, 1985

5.	LEASE	DESIGNATION	AND	SERIAL	NO.		
14-20-462-4376							

030226

7. UNIT AGREEMENT NAME

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

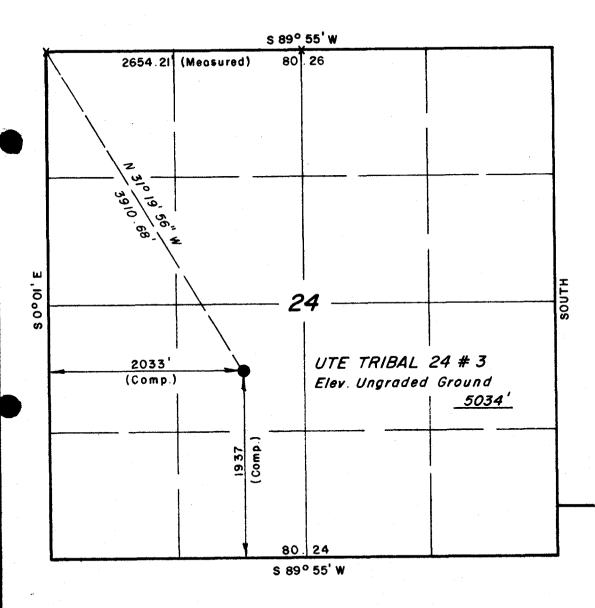
Ute Indian Tribe

Ge1

OIL [77] G	AS [T]		SINGL	: च्हा M	LTIPLE [	S 7171/ 02 17197 NA		
	ELL OTHER	<del></del>	ZONE		NE	8. FARM OR LEAST NAM		
	<b>T</b>			HE/F		Ute Tribal	24	
Conoco	Inc.		15		<u> </u>	9. WELL NO.		
3. ADDRESS OF OPERATOR				NO VX		3		
	th Poplar, Ca		82601/5		7 1987 (	10. FIELD AND POOL, OF		
At surince	4. LOCATION OF WELL (Report location clearly and in accordance with a				State requirements.*) Green River			
1,937	FSL, 2,033' F	WL (NE/SW)		DIVISION OF 11. SEC.,			LK. Ga	
At proposed prod. 201	C			OIL, GAS	& MINING	Section 24, T	4S, R1E	
14. DISTANCE IN MILES						12. COUNTY OR PARISH	13. STATE	
	7 14.5 miles so	itheast of				Uintah	Utah	
15. DISTANCE FROM PROPO LOCATION TO NEARST PROPERTY OR LEASE L (Also to dearest drig	INE. FT.	•		acres in leas		17. NO. OF ACRES ASSIGNED TO THIS WELL 638		
18. DISTANCE FROM PROP TO NEAREST WELL, D OR APPLIED FOR, ON THE	RILLING, COMPLETED,			19. PROPOSED DEPTH 20. ROT 6,810 .		TARY OR CABLE TOOLS Rotary		
21. ELEVATIONS (Show whe 5,034)		- <del></del>	<u> </u>		· · · · · · · · · · · · · · · · · · ·	22. APPROX. DATE WORK WILL START April 1, 1987		
23.		PROPOSED CASI	NG AND CE	MENTING PRO	GRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER F	тоот	SETTING DEPTH	T	QUANTITY OF CEMEN	r	
12½"	9-5/8"	36#/ft		300 t	1	65 sacks Class	"H"	
8-3/4"	7"	23 & 26#/f		6,810'		00 sacks Class		
	, , , , , , , , , , , , , , , , , , , ,					00 sacks 65/35		
All appropriate 10 A subsequent report be used for complet such operations.	t will be subm	itted upon	complet:	ion of the	e project.	A completion	rig will	
Attachments:  1.) Survey Plat  2.) 10-Point Plan			4.) BOP Diagram 5.) Archaeological Survey					
3	3.) 13-Point P	lan	6.) *Threatened & Endangered Species Survey					
IN ABOVE SPACE DESCRIBE zone. If proposal is to depreventer program, if any 24.  SIGNED  (This space for Feder PERMIT NO. 43	Irill or deepen directiona		cleAdm:		s and measured		. Give blowout	
CONDITIONS OF APPROVA	L. IF ANY:							
BLM - Vernal (4)	UOGC (2) AFI	E File 4185	(SJM)					
						•		

UT080 - 7M - 36

### T4S, R1 E, U.S.B.& M.



X = Section Corners Located

#### PROJECT

#### CONOCO, INC.

Well location, UTE TRIBAL 24 # 3. located as shown in the NE I/4 SW I/4 Section 24. T4S. R 1 E, U.S.B.& M. Uintah County, Utah.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

> REGISTERED LAND SURVEYOR REGISTRATION Nº 2454

STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING P.O. BOX Q - 85 SOUTH - 200 EAST VERNAL, UTAH - 84078

SCALE   " = 1000'		DATE II / 19 / 86 REFERENCES GLO Plat		
PARTY	BFW			
WEATHER Fair		FILE		

### CONDITIONS OF APPROVAL FOR NOTICE TO DRILL WITHIN THE UINTAH OURAY RESERVATION

Company _	Cor	noco Inc.		Well No	24-3	
Location _	Sec. 24	T4S	R1E	Lease No.		
Onsite Inspection Date		12-11	-86			

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

#### A. DRILLING PROGRAM

1. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are Expected to be Encountered

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

Report all water shows and water sands encountered during drilling to Wayne Svejnoha of the Vernal District Office. If any noticeable water flows are detected while drilling, a sample will be submitted to this office along with a copy of any water analyses performed. Copies of State of Utah form, OGC-8-X, would be acceptable.

#### 2. Pressure Control Equipment

All BOPE and testing procedures will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

An annular bag-type preventer shall be utilized and pressure tested to 1,500 psi. Ram-type preventers shall be pressure tested to 2,500 psi.

Prior to testing the BOPE equipment, Conoco will notify the Division of Minerals with sufficient lead time to allow a Bureau representative to be present.

#### 3. Casing Program and Auxiliary Equipment

Prior to running and cementing all casing strings, Conoco will notify the Division of Minerals with sufficient lead time to allow a Bureau representative to be present.

#### 4. Mud Program and Circulating Medium

No chromate additives will be used in the mud system on Federal and Indian lands without prior BLM approval from the Division of Minerals, Vernal District Office.

#### 5. Coring, Logging and Testing Program

Daily drilling and completion progress reports shall be submitted to this office on a weekly basis.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the authorized officer (A0).

A borehole compensated sonic log will be run to determine depth and thickness of the oil shale zone in this area and submitted to this office. A mud log, if compiled, will also be submitted to this office.

A cement bond log (CBL) will be run to determine the top of the cement along with the percentage of bond. This will also determine if the oil shale zone has been adequately isolated. A copy of the CBL will be provided to this office.

#### 6. Notifications of Operations

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the AO within 48 hours after spudding. If the spudding occurs on a weekend or holiday, the report will be submitted on the following regular work day. The oral report will be followed up with a Sundry Notice.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 3160-6 "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report will be filed, in duplicate, to the Vernal BLM District Office, 170 South 500 East, Vernal, Utah 84078.

<u>Immediate Report</u>: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 days following the date on which the well is placed on production.

Pursuant to NTL-2B, with the approval of a District Engineer, produced water may be temporarily disposed of into unlined pits for a period of up to 90 days. During the period so authorized, an application for approval of the permanent disposal method, along with the required water analysis and other information, must be submitted to the District Engineer.

Pursuant to NTL-4A, lessees or operators are authorized to vent/ flare gas during initial well evaluation tests, not exceeding a period of 30 days or the production of 50 MMCF of gas, whichever occurs first. An application must be filed with the District Engineer and approval received, for any venting/flaring of gas beyond the initial 30 day or authorized test period.

A schematic facilities diagram as required by 43 CFR 3162.7-2, 3162.7-3, and 3162.7-4 shall be submitted to the appropriate District Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in 43 CFR 3162.7 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-4.

A first production conference will be scheduled within 15 days after receipt of the first production notice.

No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the AO. A "Subsequent Report of Abandonment" Form 3160-5, will be filed with the AO within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

Pursuant to Onshore Oil and Gas Order No. 1, lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian lands.

#### 7. Other Information

All loading lines will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.

All off-lease storage, off-lease measurement, or commingling onlease or off-lease will have prior written approval from the AO.

Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried or anchored down from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Vernal District Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

The use of materials under BLM jurisdiction will conform to  $43~\mathrm{CFR}$  3610.2-3.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(b)(5)(ii).

In the event after-hour approvals are necessary, please contact one of the following individuals:

Craig M. Hansen (801) 247-2318 Assistant District Manager for Minerals

Gerald E. Kenczka (801) 781-1190 Petroleum Engineer

R. Allen McKee (801) 781-1368 Petroleum Engineer

## 032017

### DIVISION OF OIL, GAS AND MINING

	SPUDDING INFORM	ATION	API	#43-047-31785
NAME OF COMPANY:	CONOCO			······
WELL NAME:	UTE TRIBAL 24 #	3		
SECTION NE SW 24 TOWNSHIP	4s RANGE	1E	COUNTY	Uintah
DRILLING CONTRACTOR Leon	n Ross			
RIG #				
SPUDDED: DATE 3-17-87	_			
TIME 6:00 AM	_			
HOW Dry Hole	_Digger			
DRILLING WILL COMMENCE 3	-19-87 - Grace Ri	g #178		
REPORTED BY Pat Real	ing	-		
TELEPHONE #	7311			
DATE		SIGNED_	JRB/AS	

7orm 3160-5 November 1983)

(Other)

## UNITED STATES

STATES
SUBMIT IN TRIPLICATE\*
(Other instructions on reTHE INTERIOR verse side)

Budget	Bureau l	No.	10040	)13
Expires	August	31.	1985	

5. LEASE DESIGNATION AND SERIAL NO.

BUREAU OF LAND MANAGEMENT	14-20-H62-437,6 Oula
SUNDRY NOTICES AND REPORTS ON WELLS  (Do not use this form for proposals to drill or to deepen or plug back to a different Use "APPLICATION FOR PERMIT—" for such proposals.)	reservoir.  Ute Indian Tribe
OIL GAR OTHER	7. UNIT AGREEMENT NAME
Conoco Inc.	8. FARM OR LEASE NAME Ute Tribal 24
907 North Poplar	9. WELL NO.
LOCATION OF WELL (Report location clearly and in accordance with any State Regularement See also space 17 below.) At surface  DIVISION (  1,937 FSL, 2,033 FWL (NE/SW)  OIL GAS & M	Green River/Wasatch  11. SEC. T., E., M., OR BLE. AND
15. ELEVATIONS (Show whether DF, RT, GR, etc.)  17. 31785  5,034' GR	Uintah Utah
6. Check Appropriate Box To Indicate Nature of Notice	e, Report, or Other Data
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TRACTURE TRUBE	TREATMENT ALTERING CASING OR ACIDIZING ABANDONMENT®

(Nort: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-

Attached is a revised 10-point Drilling Program and BOP Diagram for the subject well. The drilling of subject well will now include an exploratory tail from an estimated T.D. of 6,810' to 9,300' to test the Wasatch formation. All other parts of the Application for Permit to Drill will remain as originally submitted.

Verbal approval was received from Jerry Kenzka on 3-30-87 to drill through the Wasatch formation using a 3,000 psi BOP.

18. I hereby certify that the foregoing is true and correct SIGNED		strative Supervisor	DATE March 31, 1987
(This space for Federal or State office use)			
APPROVED BY CONDITIONS OF APPROVAL, IF ANY: BLM - Vernal (4) Federal approva is required before AFE 4185 (SJM)  Operations. *5	re commencing	OF UTAH D	OVITHE STATE DIVISION OF AND MINING BALL

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States ony false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

10 Point Drilling Program
Attachment to Form 3160-5
Ute Tribal 24-3/Wasatch Tail



DIVISION OF OIL, GAS & MINING

1. Geological Surface Formation: Uinta

2. Geological Marker Tops:

Formation	Drilled Depth
Green River	2,234'
Wasatch	6,710'

3. Depths at which water, oil, gas or other mineral bearing formations are expected to be encountered.

Formation	Estimated Depth		
Green River	4,470' oil, water		
Wasatch	8,000' oil, gas, water		

4. Proposed Casing Program (All New Casing):

- Operator's Specifications for Pressure Control Equipment:
  - a. Minimum working pressure on rams and BOP equipment will be 3,000 psi.
  - b. Function test and visual inspection of the BOP will be conducted daily and noted in the Daily Drilling Report.
  - c. Both high and low pressure tests of the BOP will be conducted weekly.
  - 6. Proposed Circulating Medium:

D .1	16. 1 Mana	Demoity (1h /onla )	Viscosity (Sec./Ot.)	Water Leas
Depth	Mud Type	Density (1b./gals.)		Water Loss
0'- 300'	Native	8.5 - 9.0	30-45	NC
300'-5,000'	2% KC1	8.7 - 9.0	26-30	10-20 cc
5,000'-9,300'	2% KC1	9.0 - 10.0	30-40	Less than 10cc

The reserve pit will be lined.

- 7. Auxiliary Equipment:
  - a. Kelly cock.
  - b. Monitoring of the mud system will be done visually. A full opening drill pipe stabbing valve will be kept on the floor at all times.

10 Point Drilling Program Attachment to Form 3160-5 Ute Tribal 24-3/Wasatch Tail Page 2



DIVISION OF OIL, GAS & MINING

8. Testing, Logging and Coring:

Cores: None

DST: 1 - Green River 5,300' - 6,600'; 1 - Wasatch, 8,000'

Logging: DLL-MSFL; FDC-CNL-GR, T.D. to 300'

Formation and Completion Interval: Green River/Wasatch 5,300' - T.D.

9. Abnormal Pressures or Temperatures; Potential Hazards:

No abnormal pressures or temperatures are anticipated.

10. Anticipated Starting Date and Duration:

March 31, 1987 15 days

## FILING FOR WATER IN THE STATE OF UTAH

L	Xe
fr	

### 040909

Rec. by
Fee Paid <b>\$</b>
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Roll #

## APPLICATION TO APPROPRIATE WATER

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah. 13.047.31785

WATER USER CLAIM NO. 43 - 9964

APPLICATION NO. T62321

1. PRIORITY OF RIGHT: March 3, 1987

FILING DATE: March 3, 1987

2. OWNER INFORMATION

Name: Incorporated Conoco Address: 907 North Poplar, Casper, WY 82601

- 3. QUANTITY OF WATER: 3.0 acre feet (Ac. Ft.)
- 4. SOURCE: Duchesne River DRAINAGE: Duchesne River POINT(S) OF DIVERSION:

COUNTY: Uintah

(1) S. 2700 feet, from the NW Corner of Section 23, Township 3 S, Range 1 E, USM Description of Diverting Works: Transported by tank truck

COMMON DESCRIPTION:

5. NATURE AND PERIOD OF USE

Oil Exploration From March 16 to March 16.

6. PURPOSE AND EXTENT OF USE

Oil Exploratio: Gas or oil well drilling and production operation of Ute Tribal 24 No. 3

7. PLACE OF USE

•	I LITOL OF GOD		h of the foil	lowing legal sub-	117151005.
	The water is used in				l South East Quarter
		st Quarter   North We	st Quarter	South West Quarter	4
	•		SW1 SE1 NE	EŁ NWŁ SWŁ SEŁ	NET NWT SWT SET
	TOWN RANGE SEC NET NWT	SWA SEA NEA NWA	3HT 3L4 114		
			_ <u> X</u>		
	4 S 1 E 24	<u> </u>			

All locations in Uintah Special Base and Meridian

**EXPLANATORY** :

The water will be used from Mar. 16, 1987 to Mar. 16, 1988. \*The point of diversion from the source is situated at NW/SW, Section 23, T3S, R1E USBM., in Wintah County



**DIVISION OF** OIL, GAS & MINING

## **TEMPORARY** FILING FOR WATER IN THE STATE OF UTAH

	•	
601800	Rec. bv -	DLT
081020	Fee Paid S	15.0

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### APPLICATION TO APPROPRIATE WATER

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

WATER USER CLAIM NO. 43 - 9967

APPLICATION NO. T6234

Interest: 100 %

1. PRIORITY OF RIGHT: March 16, 1987 DIVISION OF OIL. GAS & MINING

FILING DATE: March 16, 1987

2. OWNER INFORMATION

Name: Curry Leasing phone (801) 454-3334

Address: C/O Joe Curry, P.O. Box 227, Altamont, UT 84001

The land is not owned by the applicant(s), see explanatory.

- 3. QUANTITY OF WATER: 6.0 acre feet (Ac. Ft.)
- 4. SOURCE: Duchesne River DRAINAGE: Duchesne River

which is tributary to Green River which is tributary to Colorado River

POINT(S) OF DIVERSION:

COUNTY: Uintah

(1) S. 2700 feet, from the NW Corner of Section 23,

Township 3 S, Range 1 E, USM Description of Diverting Works: pumped into tank trucks

COMMON DESCRIPTION: 5.5 Mi. So. Ft. Duchesne

5. NATURE AND PERIOD OF USE From March 16 to March 16 Oil Recovery:

23#2 BH. 43-047-31786 45 1E 23 PA 43-047-31785 45 1E 24

6. PURPOSE AND EXTENT OF USE

Oll Recovery: Oll Well Drilling and production work Drilling and completion of Ute Tribal 23 No. 2 and Ute Tribal 24 No.

7. PLACE OF USE

The water is used in all or parts of each of the following legal subdivisions. North East Quarter North West Quarter South West Quarter South East Quarter SW NE# TOWN RANGE SEC NET NW1 NW1 SWł INE! NE1 4 S 1 E 24 İΧ

All locations in Salt Lake Base and Meridian

**EXPLANATORY** 

Pt. of Diversion is on Indian Land. Will acquire permission before diverting



#### STATE OF UTAIL DIVISION OF OIL, GAS AND MINING CIL AND CAS INSPECTION RECORD

**DIVISION OF** OIL. GAS & MINING

CPERATOR: CONOCO INC

WELL NO.: UTE TRIBAL 24-0

GTR/GTR: NEGW

SECTION: 24

TWP: 4 COUTH

14 20 HC2 4376

43 047-31785

COUNTY: UINTAH

FIELD:

'CONTRACTOR: GRACE #181

DRILLING / COMPLETION / WORKOVER

APD

GAFETY

Y WELL SIGN Y HOUSEKEEPING Y BOPE Y POLL. CONTROL Y SURFACE USE Y PITS

OPERATIONS

OTHER

CHUT IN / TA:

WELL CIGN

HOUSEKEEPING

EQUIPMENT

SAFETY

CHUT IN TA

ABANDONED:

MARKER

HOUSEKEEPING REHAB

OTHER

OTHER

PRODUCTION:

WELL SIGN

HOUSEKEEPING POLL. CONTROL

EQUIPMENT

FACILITIES

METERING SECURITY

SAFETY

PITC OTHER DISPOSAL

CAS DISPOSITION:

VENTED

FLARED

SOLD

LEASE USE

LEGEND: Y YES OR SATISFACTORY

N NC OR UNGATISFACTORY

NA NOT APPLICABLE

FACILITIES INSPECTED: LOCATION, WELL HEAD, RESERVE PIT, DRILLING RIG, BOPE

REMARKS: DRILLING AT 8545'. PIT FENCED, LINED AND 1/2 FULL OF DRLG FLUIDS. BOP

TESTS DONE RESULARLY. CLEAN LOCATION.

ACTION:

INSPECTOR: CAROL A. KUBLY

DATE: 8 APRIL 87

7orm 3160-5 November 1983) Formerly 9-331)

### UNITED STATES SUBMIT IN TRIPLICATE\* Other Instructions on reverse side) BUREAU OF LAND MANAGEMENT

Form approved. Budget Bureau No. 1004-0135 Expires August 31, 1985

5. LEASE	KOITAKDIEEG	AND	SERIAL	ĸo
14-20	-H62-437	76		
		_		

SUNDRY NOTICES A	DN	REPORTS	ON	WELLS
------------------	----	---------	----	-------

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute Indian Tribe

Use "APPLICATION FOR PERMIT—" for such proposals.)	1.
1.	7. UNIT AGREEMENT NAME
OIL X GAS OTHER	<u> </u>
NAME OF OPERATOR	8. FARM OR LEASE NAME
Conoco Inc.	Ute Tribal 24
3. ADDRESS OF OPERATOR	9; WELL NO.
907 North Poplar, Casper, WY 82601	3
LOCATION OF WELL (Report location clearly and in accordance with any State requirements.	10. FIELD AND POOL, OR WILDCAT
See also space 17 below.) At surface	Green River/Wasatch
	11. SEC., T., B., M., OR BLK. AND SURVEY OR AREA
1,937' FSL, 2,033' FWL (NE/SW)	
	Sec. 24, T4S, R1E
14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH 13. STATE
5.034' GR	Uintah Utah
Cl. I. A	Oth - D - t -

том	ice o	F INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHCT-OFF		PULL OR ALTER CASING		WATER SHUT-OFF BEPAIRING WELL	
FRACTUBE TREAT		MULTIPLE COMPLETE		FRACTURE TREATMENT ALTERING CASING	_
SHOOT OR ACIDIZE		ABANDON*		SHOOTING OR ACIDIZING ABANDONMENT*	X
REPAIR WELL		CHANGE PLANS		(Other)	<u>.</u>
(Other)				(Note: Report results of multiple completion on Wel Completion or Recompletion Report and Log form.)	

The subject well was plugged and abandoned on April 16, 1987 as follows:

Plug No.	<u>Interval</u>	Number of Sacks
1	8,480' - 8,410'	65
2	6,650' - 6,500'	70
3	2,300' - 2,150'	94
4	350' - 200'	80
5	50' - surface	21

All Cement is Class "G"

A Sundry Notice will be submitted when the location has been restored and is ready to be inspected.

18. I hereby certify that the foregoing is true and correct		_
SIGNED Chongron	TITLE Administrative Supervisor DATE 4/23/87	
(This space for Federal or State office use)		=
APPROVED BY	ACCEPTED BY JAHE STATE	
CONDITIONS OF APPROVAL, IF ANY:	OF UTAH DIVISION OF	
BLM - Vernal (3)	OH, GAS, AND MINING	
UOGC (2) *S	ee Instructions on Reverse Side	- •
APP (105 (CTM)	The state of the s	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States on false, fictitious or fraudulent statements or representations as to any matter within its purisdiction.

<sup>17.</sup> DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

7om 3160-5 November 1983) Formerly 9-331)

TEST WATER SHUT-OFF

FRACTURE TREAT

REPAIR WELL

SHOOT OR ACIDIZE

### UNITED STATES SUBMIT IN TRIPLICATE® (Other instructions on reverse aide) BUREAU OF LAND MANAGEMENT

PULL OR ALTER CASING

MULTIPLE COMPLETE

CHANGE PLANS

Form approved. Budget Bureau No. 1004-0135 Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-4376

REPAIRING WELL

ALTERING CASING

ABANDON MENT

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

(Do not use this form for proposals to drill or to deepen o	r plug back to a different reservoir.
I.  OIL X GAS OTHER	0) 1 CONT 101 04 04 28 09
2. NAME OF OPERATOR CONOCO Inc.	APR 24 1987 Ute Tribal 24
3. ADDRESS OF OPERATOR 907 North Poplar, Casper, WY 82601	DIVISION OF 3
4. LOCATION OF WELL (Report location clearly and in accordance w See also space 17 below.) At surface	Green River/Wasatch 11. sac., T., B., M., OR BLK. AND
1,937' FSL, 2,033' FWL (NE/SW)	Sec. 24, T4S, R1E
14. PERMIT NO. 15. ELEVATIONS (Show what is a second of the second of th	tether DF, RT, GR, etc.)  12. COUNTY OR PARISH 13. STATE  Uintah  Utah
16. Check Appropriate Box To Indi	case Nature of Notice, Report, or Other Data  BUBBEQUENT REPORT OF:

(Norn: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) (Other) 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

Verbal approval was received from Jerry Kenczka, BLM - Vernal on April 15, 1987 to plug and abandon the subject well as follows:

X

Plug No.	<u>Interval</u>	Number of Sacks
1	6,500' - 6,650'	70
2	2,150' - 2,300'	94
3	200' - 350'	80
<u>.</u>	0' - 50'	21

All Cement is Class "G"

	YM	ſS
8. I hereby certify that the foregoing is true and correct SIGNED	TITLE Administrative Supervisor DATE 4/21/87	
(This space for Federal or State office use)	ACCEPTED BY THE STATE	
APPROVED BY CONDITIONS OF APPROVAL, IF ANY:  BLM - Vernal (3)  NOGC (2)  AFE 4185 (SJM)  AFE 4185 (SJM)  *Sections.	OF UTAH DIVISION OF	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or ag United States ony false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

04211

Casper,

TECHNICAL SERVICES, Security Life Bldg. • Suite 1350 • 1616 Glenarm • Denver, Colorado 80202 • Phone. (303) 573-8027

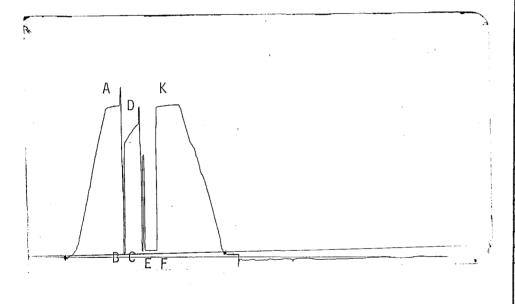
Contractor_	Grace Drilling		1"
Rig No	#181	Bottom Choke	1"
Spot	NE/SW	Size Hole	7 7/8"
Sec	24	Size Rat Hole	
Twp	4S	. Size & Wt. D. P.	4½" XH 16.60#
Rng	1E		ta +4
•	Green River		2∄"
County	Unutah	Length of D. C	339 ft
State	Utah	. Total Depth	
Elevation	5034_ft	. Interval Tested	
Formation_		Type of Test	Inflate
			Straddle

6	Min
60	Min
60	Min
	Min
	Min
,	Min
	60 60 

Bottom Hole Temp.	162 <sup>0</sup> F
Mud Weight	9.3
Gravity	
Viscosity	

Tool opened @ 6:00 am

Outside Recorder



PRD Make	Kuster	K-3
No. <u>9799</u> Cap.	6200	@ <u>8245'</u>
Press		Corrected
Initial Hydrostatic	Α	4100
Final Hydrostatic	K	4090
Initial Flow	В	100
Final Initial Flow	С	100
Initial Shut-in	D	3595
Second Initial Flo	w E	177
Second Final Flow	, F	167
Second Shut-in	G	
Third Initial Flow	H.	
Third Final Flow	1	
Third Shut-in	J	

Lynes Dist. Gillette, WY
Our Tester: Doug Bobbitt
Witnessed By: Bob Williams

Did Well Flow - Gas No Oil No Water No

RECOVERY IN PIPE:

100 ft. Drilling mud = .49 bbl.

Blow Description:

1st flow:

Tool opened with a very weak surface blow becoming nil in 3

minutes and remaining throughout the flow.

2nd flow:

Tool opened with a weak blow becoming nil in 2 minutes and

remaining throughout the flow.

Misrun:

Packer seat failed midway into the second shut-in. Pressure data from the initial shut-in period may not be valid due to

a possible hydrostatic leak.

No. Final Copies

CONOCO INC. 6T #: 3 UTE TRIBAL #24-3 8240.0 ft - 8350.0 ft

Location: 24-

24-45-1E

Test Type: INFLATE STRADDLE

Formation: N/A

Recorder Number:

22568

Recorder Depth:

8213 ft

SAMPLE DATA

SAMPLE CHAMBER

Capacity of sample chamber.. 2150 cc
Volume of sample..... 2150 cc
Pressure in sampler.... 6.00 psi
Where sampler was drained... ON LOCATION

Sampler Contained:
Mud 2150 cc

RESISTIVITY DATA: \*\*\*\*\*\*\*\*

Top.....: 1450 PPM NACL Sampler....: 1700 PPM NACL Mud Pit....: 1650 PPM NACL

CONOCO INC. BT #: 3 UTE TRIBAL #24-3 8240.0 ft - 8350.0 ft

PRESSURE RECORDER NUMBER: 22548

DEPTH : 8213.00 ft

LOCATION : INSIDE

TYPE : K-3

CAPACITY : 6500.00 psi

PRESSURE

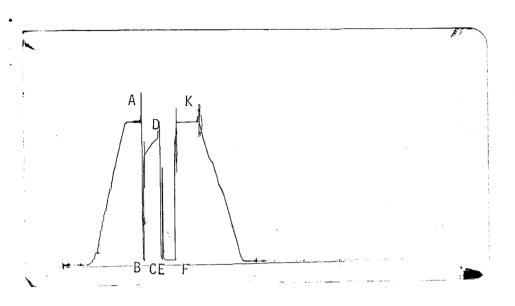
psi.

A) Initial Hydrostatic: 4074.0 B) Start of 1st Flow : 104.0 C) End of 1st Flow : 87.0

D)End of 1st Shut-in: 3595.0

E)Start of 2nd Flow : 87.0 F)End of 2nd Flow : 87.0

Q)Final Hydrostatic : 4034.0



TEST TIMES (MIN)

The applicant hereby acknowledges he/they are a citizen(s) of the United States or intends to become such a citizen.

The quantity of water sought to be appropriated is !imited to that which can be beneficially used for the purpose herein described.

The undersigned hereby acknowledges that even though he/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained therein, at the time of filing, rests with the applicant(s).

Signature of Applicant

### STATE ENGINEER'S ENDORSEMENT

WATER RIGHT NUMBER: 43 - 9964

APPLICATION NO. T62321

1. March 3, 1987

Application received.

2. April 1, 1987

Application designated for APPROVAL by RWL and SG.

3. Comments:

Conditions:

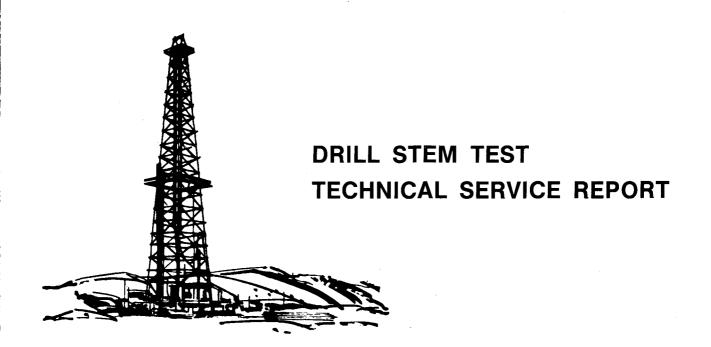
This application is hereby APPROVED, dated April 3, 1987, subject to prior rights and this application will expire on April 3, 1988.

Robert L. Morga State Engineer



A Baker Oil Tools Company

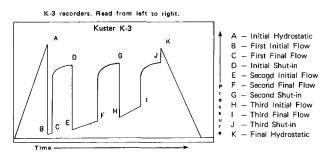




#### **GUIDE TO INTERPRETATION AND IDENTIFICATION** OF LYNES DRILL STEM TEST PRESSURE CHARTS

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

#### **CODE USED ON CHART ENVELOPES**



AK-1 recorders. Read from right to left.

#### **NOMENCLATURE**

Symb	Definition	DST Unit
k	permeability	millidarcys (md)
h	pay thickness	feet (ft.)
u	viscosity	centipoise
Т	reservoir temperature	<sup>o</sup> Rankin ( <sup>o</sup> R)
Z	gas compressibility factor at average condition	
$g_{SC}$	gas production rate	MCF/d
M	Horner slope for liquid analysis	PSI/Cycle
Mg	— Horner slope for (P <sup>2</sup> ) gas analysis	PSI <sup>2</sup> /Cycle
Pi	initial static reservoir pressure	PSI
Pwf	flowing bottom hole pressure	PSI
Ø	porosity	(fraction)
rw	— well bore radius	ft.
S	skin factor	
AOF	absolute open flow	MCF/d
D.R.	— damage ratio	
re	— external drainage radius	ft.
ISIP	initial shut-in pressure	PSI
FSIP	— final shut-in pressure	PSI
b	approx. radius of investigation	ft.
t	flowing time	hrs.
В	formation volume factor	
q	liquid production rate	bbls/day
c	gas compressibility	1/PSI
С	— liquid compressibility	1/PSI

#### A. Liquid Calculations

- 1. Transmissibility 2. Capacity 3. Permeability  $\frac{Kh}{u} = \frac{162.6 \text{ q B}}{m} \qquad Kh = \frac{Kh}{u} \times u \qquad K = \frac{Kh}{h}$

$$K = \frac{Kh}{h}$$

4. Skin Factor

$$S = 1.151 \left[ \frac{Pi - Pwf}{m} - \frac{Log}{\phi u cr_{w}^{2}} + 3.2275 \right]$$

5. Pressure Drop Due to Skin

$$\triangle P_{Skin} = \frac{162.6 \text{ Bgu}}{Kh} \times 0.869s$$
  
or  $\triangle P_{Skin} = 0.869 \text{ M S}$ 

6. Damage Ratio

$$\frac{\text{Pi - Pwf}}{\text{m} \left[ \begin{array}{c} \text{Log} \\ \text{\phi ucr}_{\text{W}} 2 - 3.2275 \end{array} \right]}$$

7. Productivity Index

8. Productivity Index Damage Removed

$$\frac{qt}{Pi-Pwf} = P. I. a X D. R.$$

9. Radius of Investigation

$$b = 0.029 \sqrt{\frac{Kt}{\phi uc}}$$

10. Depletion Factor %

- 1. Transmissibility 2. Capacity  $\frac{Kh}{u} = \frac{1637 \text{ T} + 2^{q}\text{sc}}{Mg} \qquad \frac{Kh}{u} \times u = Kh$
- 3. Permeability

4. Apparent Skin Factor

S = 1.151 
$$\left[\frac{\text{Pi}^2 - \text{Pwf}^2}{\text{Mg}} \cdot \log\left(\frac{\text{Kt}}{\text{øucr}_W}\right) + 3.2275\right]$$

5. Pressure Drop Due to Skin 
$$\triangle P_{skin} = Pi - Pwf = \sqrt{\{Pwf^2\} + 0.869 \text{ Mg S}}$$

6. Damage Ratio

$$\frac{\text{Pi}^2 - \text{Pwf}^2}{\text{Mg} \left[ \begin{array}{c} \text{Log} & \underline{\text{Kt}} \\ \text{ $\phi \text{ucr}_W 2 - 3.2275} \end{array} \right]}$$

7. Absolute Open Flow

Mg 
$$\begin{bmatrix} Log & \underline{Kt} \\ & &$$

8. AOF Damage removed

b = 0.029 
$$\sqrt{\frac{Kt}{\phi u\bar{c}}}$$

9. Estimated Stabilized AOF

(Pi<sup>2</sup>) (Kh)
$$\frac{(Pi^2) \text{ (Kh)}}{3263 \text{ uzt}} \left[ \frac{\text{Log}}{\text{rw}} \left( \frac{.472 \text{ re}}{\text{rw}} \right) + \frac{\text{s}}{2.303} \right]$$



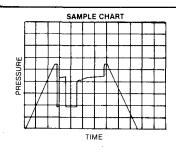


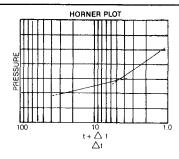
1754 Walter Ventura, CA 93003 1-805-644-7390 1616 Glenarm Pl. Suite 1350 Denver, CO 80202 1-303-573-8027 330 Midland Executive Center 310 W. Illinois Ave. Midland, TX 79701 1-915-682-9912



DIVISION OF OIL. GAS & MINING

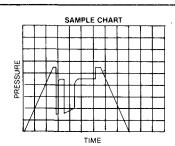
## Lynes Guide to Detection of Geological Anomalies

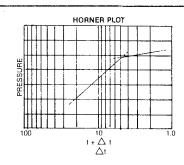




## Horner Plot Slope Breaks Upward Possible Causes

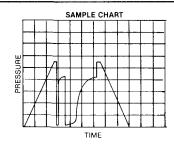
- (1) decrease in pay thickness away from the wellbore
- (2) decrease in permeability away from the wellbore
- (3) increase in viscosity of reservoir fluid (fluid contact)
- (4) barrier within the radius of investigation

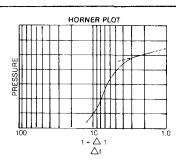




### Horner Plot Slope Breaks Downward Possible Causes

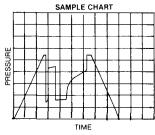
- (1) increase in pay thickness away from the wellbore
- (2) increase in permeability away from the wellbore
- (3) decrease in viscosity away from the wellbore

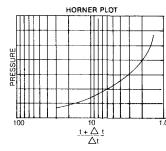




### **Early Time Deviation of Horner Plot Possible Causes**

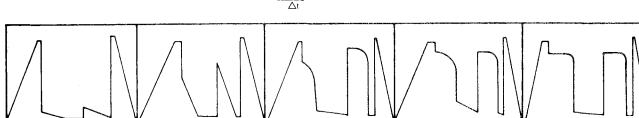
- wellbore damage due to filtrate invasion, drilling solids, etc.
- (2) partial penetration of pay zone
- (3) plugging or choking of perforations (casing test only)
- (4) wellbore storage effects (low permeability gas wells)





#### Horner Plot Slope Continually Increasing Possible Causes

- (1) well between two parallel boundaries (channel sand)
- (2) induced hydraulic fractures



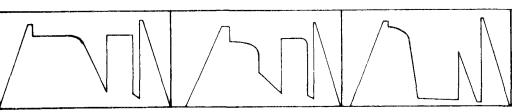
Very low permeability. Usually only mud recovered from interval tested. Virtually no permeability.

Slightly higher permeability. Again usually mud recovered.

Slightly higher permeability. Small recovery, less than 200 ft).

Average permeability. Final and initial shutins differ by 50 psi.

Average permeability. Strong damage effect. High shut-in pressure, low flow pressure.



Excelent permeability where final flow final shut-in pressure.

High permeability where ISIP and FSIP are within 10 psi.

Deep well bore invasion or damage. Final shut-in higher than the initial shut-in.

Form 3160-4 (November 1983) (formerly 9-330)

## UNTED STATES

SUBMIT IN DUPLI

### (See other in-

5. LEASE DESIGNATION AND SERIAL NO.

### Form approved. Budget Bureau No. 1004-0137 Expires August 31, 1985

14-20-Н62-4376

### DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

structions on reverse side)

										6. IF INDIAN.	ALLOT	TEE OR TRIBE NAME
WELL COMPLETION OR RECOMPLETION REPORT AND LOG*								G *	Ute Indian Tribe			
1a. TYPE OF WEL		011,	GAS	7	Tr. (m)	Sel / A		1881918	~ \ K\ \.			
L MURM OF COM	ni emioni.	WELL L	] WELL L	D	av 4D			170 12		÷	U4	2803
b. TYPE OF COM	WORK [	DEEP-	n Pire F	DIFF			A description ::	. Sel		S. FARM OR I	EASE :	NAME
	OVER	EN L	BACK	RES	rr. Li	Rance —	0 9 7	1097		Ute Tr		_
2. NAME OF OPERAT					<i>چه</i> د	API	K & 1	1507		9. WELL NO.		27
Conoco Inc							4010	NIAC		3		
3. ADDRESS OF OPE		0			2601	יום	VISIO	NOF	^	10. FIELD AN	p POOL	OR WILDCAT
907 North						OIL G	<u> </u>	MININ	<u>G</u>			
4. LOCATION OF WEI						y State req	nireme)	nts)*				r/Wasatch
At surface 1,9	937 <b>'</b> FSI	, 2,03	3' FWL	(NE/SW	I)					OR AREA	, A., U	R BEOCK AND BOME
At top prod. int	erval report	€∰elow	·							Sec. 24	, T48	S, R1E
At total depth												
				14. PE	RMIT NO.		DATE	ISSUED		12. COUNTY C	R	13. STATE
			-	43-04	7-317	85	2-	-2-87		Uintah		Utah
3-17-87	16. DATE T		ED 17. DAT	E COMPL. N/A	(Ready to	prod.)		5,034		RT, GB, ETC.)*	19. E	LEV. CASINGHEAD
20. TOTAL DEPTH. MD	A TVD   21	. PLUG. BAC	K T.D., MD &	TVD   22	. IF MUL	TIPLE COM	PL.,	23. INT		ROTARY TOOL	s	CABLE TOOLS
					HOW M			DRI	LLED BY	0' - 9.30	181	
9,308 1	V41 (9) 0= 1		face	. BOTTOM	NAME (N	D AND TV	D)•	1		U - 9,30		WAS DIRECTIONAL
44. PRODUCING INTER	TALLOJ, OF	THIS COST		,,			,					SURVEY MADE
1	A/A										27 -	NO S WELL CORED
26. TYPE ELECTRIC	ND OTHER L	OGS RUN									21. W	
DLL-MLL-GI	R; FDC-C	NL-GR;			m	ud		4-24-	<u>82</u>	1		No
28.			CAS	NG RECO	RD (Rep	ort all stri	ng sofet	in well)				
CASING SIZE	WEIGHT,	LB./FT.	DEPTH SE	T (MD)	но	LE SIZE		CE	MENTING	RECORD	[.	AMOUNT PULLED
9 5/8"	36#		284	1	12 3	/4"	184	4 ft <sup>3</sup> (	Class	"G" w/2%		
	-					·				CaCl <sub>2</sub>		
							_					
	-		·				_ _					
29.		LINE	R RECORD		<u> </u>			30.		TUBING RECO	RD	
BIZE	TOP (MD)		rom (MD)	SACKS CI	EMENT*	SCREEN	(MD)	SIZE		DEPTH SET (M	D)	PACKER SET (MD)
	101 (112)											
									-			
31. PERFORATION REC	opp (Intern	al size an	d number)	<del>!</del>		32.		CID. SHOT	FRACT	URE, CEMENT	SQUE	EZE, ETC.
JI. PERFORATION	(3	,						AL (MD)	<del></del>	OUNT AND KIN		
77 / A						DEPIR	INTERVA		ATTAC			
N/A								SEE	ALIAC	ILED		
									·			
				,					·			
									1			
33.•						DUCTION		4		i werr	OTATUS	(Producing or
DATE FIRST PRODUCT	ION	PRODUCTIO:	N METHOD (	r towing, g	as ust, pi	umping—81	ize and	·ype oj pu	• p )	shu	t-in)	-
N/A	\											Abandoned
DATE OF TEST	HOURS TES	TED	CHOKE SIZE		N. FOR PERIOD	OIL-BB	L.	GAS-M	CF.	WATER-BBL	.	GAS-OIL RATIO
N/A					<del></del>	1				<u> </u>		
FLOW. TUBING PRESS.	CASING PR		CALCULATED 24-HOUR RAT	011	881.,	GAS	S-MCF	•	WATER-	HBL.	OIL GE	AVITY-API (CORR.)
	*****	-	<del></del>									
34. DISPOSITION OF G	AS (Sold, use	d for fuel,	vented, etc.	)						TEST WITNES	SED B1	·
35. LIST OF ATTACH	MENTS					· <del> </del>				1		
	•											
36. I hereby certify	that the for	ezoing an	d attached i	nformation	is comp	lete and c	orrect s	as determin	ed from	all available r	ecords	
i. A mereoy territy	J. 101	1										10010=
SIGNED	0	Lamp	202	ті	TLE A	dminis	trat:	ive Sup	ervis	or DATE	:4	/23/87
U. U. M. D												

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

	ď	TRUE VERT, DEPTH						 · •			
GEOLOGIC MARKERS	TOP	MEAS, DEPTH	2,098'			,	\$ **	. <b>%</b> **			
38. GEOL		NAME	Green River Wasatch								
in pressures, and	rc.										
and contents thereot; cored intervals; and all tool open, flowing and shut-in pressures, and	DESCRIPTION, CONTENTS, ETC.			SEE ATTACHED							
	DES			SEE /							
SUMMAKY OF PURCUS ZONES: (Snow all important zones of porosity drill-stem, tests, including depth interval tested, cushion used, time recoveries):	BOTTOM										
ncluding depth in	TOP	· ***		· ,					 	-	
drill-stem, tests, in recoveries):	FORMATION										

Form 3160-4 Ute Tribal 24 No. 3 April 23, 1987

### 32. Acid, Shot, Fracture, Cement Squeeze, etc.

Plug No.	<u>Interval</u>	No. of Sacks
1	8,480' - 8,410'	65
2	6,650' - 6,500'	70
3	2,300' - 2,150'	94
4	350 <b>' -</b> 200 <b>'</b>	80
5	50' - surface	21

All cement is Class "G".

Form 3160-4 Ute Tribal 24 No. 3 April 23, 1987

#### 37. Summary of Porous Zones:

DST No. 1 Test Interval 6,000' - 6,222'

Initial Flow: 5 min.
Initial Shut-In: 60 min.
Final Flow: 60 min.
Final Shut-In: 180 min.

Drill Pipe Recovery: 120' mud 0.5' oil

Sample Chamber Recovery: 50 cc oil 80 cc mud

.36 cf gas @ 60 psi

DST No. 2 Test Interval 6,228' - 6,810'

Initial Flow: 6 min.
Initial Sunt-In 60 min.
Final Flow: 60 min.
Final Shut-In: 180 min.

Drill Pipe Recovery: 455' mud 6' oil

Sample Chamber Recovery: 0 cc oil 300 cc water 2100 cc mud

DST No. 3 Test Interval 8,240' - 8,350'

Initial Flow: 6 min.
Initial Shut-In: 60 min.
Final Flow: 60 min.
Final Shut-In: 90 min.

Drill Pipe Recovery: 100' mud

Sample Chamber Recovery: 2,100 cc mud

Form approved. Budget Bureau No. 1004-0135 UNITED STATES

SUBMIT IN TRIPLICATE\*

Other Instructions on re
DEPARTMENT OF THE INTERIOR verse side) Expires August 31, 1985 7om 3160-5 November 1983) 5. LEASE DESIGNATION AND SERIAL NO. Formerly 9-331) BUREAU OF LAND MANAGEMENT 14-20-H62-4376 6. IF INDIAN. ALLOTTEE OR TRIBE NAME SUNDRY NOTICES AND REPORTS ON WELLS (Do not use this form for proposals to drill or to deepen or plug back to a Use "APPLICATION FOR PERMIT..." for such proposals.) different reservoir. Ute Indian Tribe WELL Dry Hole OTHER 8. FARM OR LEASE NAME 2. NAME OF OPERATOR Ute Tribal 24 Conoco Inc 3. ADDRESS OF OPERATOR 907 North Poplar Casper WY 82601
LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*
See also space 17 below.)
At surface 10. FIELD AND POOL, OR WILDCAT Green River/Wasatch 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 24, T4S, R1E 1,937' FSL, 2,033' FWL (NE/SW) 12. COUNTY OR PARISH | 13. STATE 15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5,034' GR Uintah Utah Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data 16. NOTICE OF INTENTION TO: REPAIRING WELL WATER SHUT-OFF PULL OR ALTER CASING TEST WATER SHUT-OFF ALTERING CASING FRACTURE TREATMENT MULTIPLE COMPLETE FRACTURE TREAT ABANDONMENT<sup>®</sup> SHOOTING OR ACIDIZING ARANDON® SHOOT OR ACIDIZE CHANGE PLANS REPAIR WELL (Norm: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) Update Venting Approval 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertiproposed work. If nent to this work.) \* Per the BLM's conditions of approval for venting gas from Conoco's Ute Tribal 26 No. 1, this notice serves to update the economic analysis previously presented. The subject well (24 #3) is the second well drilled in this field. Since this well was abandoned as a dry hole, no additional gas is available for selling or venting and the economics for venting from the 26 #1 remain unchanged.

RECLEAN BUT WAY 0 4 1987

DIVISION OF OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct SIGNED AND DOWNLOW	TITLE Administrative Supervisor	DATE 4/29/87
(This space for Federal or State office use)		
APPROVED BY	TITLE	DATE
4-3		

UOGC (1)

\*See Instructions on Reverse Side

# STATE OF UTAH DIVISION OF OIL, GAS AND MINING OIL AND GAS INSPECTION RECORD

PA

OPERATOR: CONOCO INC LEAGE: 14 20 NG2 407G

WELL NO.: UTE TRIBAL 24 0 API: 40 047 01700

GTR/QTR: CECTION: 24 TWP: 4 COUTH RANCE: 1 CAST

COUNTY: UINTAH FIELD: CREEN RIVER/WAGATCH

CONTRACTOR:

DRILLING / COMPLETION / WORKOVER

APD WELL CIGH HOUSEKEEPING BOPE :\*
CAPETY POLL. CONTROL SURFACE USE PITS

OPERATIONS OTHER

SHUT IN / TA:

WELL SIGN HOUSEKEEPING EQUIPMENT SAFETY

CRUT IN TA CTHER

ADAMDOMED:

Y MARKER Y HOUGEKEEPING H REHAB Y OTHER

PRODUCTION:

WELL GIGN HOUSEKEEPING EQUIPMENT FACILITIES METERING POLL CONTROL PITS DISPOSAL

SECURITY SAFETY OTHER

GAS DISPOSITION:

VENTED FLARED COLD LEAGE UCD

LECEND: Y - YES OR SATISFACTORY

H NO OR UNCATIONACTORY

MA MOT APPLICABLE

PACILITIES INSPECTED: LOCATION, DEA MARKER, RESERVE DIT, PLARE PIT.

REMARKS: PLUGGED 4/20/87 MARKER IN PLACE. RECERVE PIT LINED, FENGED AND 1/4 PULL OF DRLC PLUIDS. RAT HOLE AND MOUSE HOLE OPEN. LOCATION NEEDS

CONTOURING AND REHABING. WILL CHECK DACK ON THIS ONE.

ACTION:

INCRECTOR: CAROL A. MUBLY DATE: C MAY 07